

**What is claimed is:**

1. A flexible chain guide for guiding a length of a chain that extends between spaced-apart sprockets and has chain links engageable with teeth on the sprockets, said flexible chain guide comprising:

an elongated flexible, resilient spring leaf having a fixed end and an unattached free end,

said spring leaf being adapted to extend lengthwise along one side of the length of chain and to bear against and guide the length of chain to damp vibration.

2. The flexible chain guide of claim 1, wherein said spring leaf is attached to a mounting bar, and said mounting bar and said spring leaf are of integral, one-piece construction and made of a plastic material.

3. The flexible chain guide of claim 2, wherein said plastic material is Nylon.

4. The flexible chain guide of claim 2, wherein said mounting bar has an inner end portion and an outer end portion, said inner end portion of said bar extending alongside said spring leaf in spaced relation thereto and cooperating with said spring leaf to define a generally U-shaped recess.

5. The flexible chain guide of claim 4, further including a flexible, resilient, generally U-shaped metal reinforcing strip lining said recess and bearing against said spring leaf and against said inner end portion of said bar to reinforce and back up said spring leaf when said spring leaf bears against the length of chain.

6. The flexible chain guide of claim 5, wherein said plastic material is Nylon.

7. A chain and sprocket system, comprising:  
a rotatable drive sprocket having drive sprocket teeth,

a rotatable driven sprocket spaced from said drive sprocket and having driven sprocket teeth,

an endless chain for transmitting rotation of said drive sprocket to the driven sprocket, said chain extending over said sprockets and having chain links engaging the teeth on said sprockets,

said chain having first and second chain sections extending between said sprockets, one of said chain sections constituting a tension side of said chain and the other of said chain sections constituting a slack side of said chain depending on the direction of rotation of said sprockets, and

a chain guide for the slack side of said chain,

said chain guide including a body having a fixed mounting bar, and

an elongated flexible, resilient spring leaf having one end attached to said mounting bar and an unattached free end,

said spring leaf extending lengthwise along the slack side of the chain and bearing against the slack side of the chain to damp vibration.

8. The chain and sprocket system of claim 7, wherein said spring leaf is flexed from its natural, free-state condition into pressure engagement with the slack side of the chain.

9. The chain and sprocket system of claim 8, wherein said body including the mounting bar and said spring leaf, is of integral, one-piece construction and made of a plastic material.

10. The chain and sprocket system of claim 9, wherein said plastic material is Nylon.

11. The chain and sprocket system of claim 10, wherein said mounting bar has an inner end portion and an outer end portion, said inner end portion of said bar extending alongside said spring leaf in spaced relation thereto and cooperating with said spring leaf to define a generally U-shaped recess, and a flexible, resilient, generally U-

shaped metal reinforcing strip lining said recess and bearing against said spring leaf and against the inner end portion of said bar to reinforce and back up and maintain said spring leaf in pressure engagement with the slack side of said chain, and fasteners securely anchoring said inner and outer end portions of said bar.